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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Law Offices of Albert S. Michalik, PLLC  
Suite 193  
704- 228th Avenue NE  
Sammamish, WA 98074

EXAMINER

NEWAY, SAMUEL G

ART UNIT PAPER NUMBER

2194

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/734,016	<b>Applicant(s)</b> EL-SHIMI ET AL.	
	<b>Examiner</b> Samuel G. Neway	<b>Art Unit</b> 2194	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Claims 1 – 40 are pending and are considered below.

**DETAILED ACTION**

2. Examiner's note: The Applicant appears to be attempting to invoke 35 U.S.C. 112 6<sup>th</sup> paragraph in Claims 37 – 40 by using "means plus function" language. However, the Examiner notes that the only "means" for performing these cited functions in the specification appears to be software. Since no other specific structural limitations are disclosed in the specification, the claims have not invoked 35 U.S.C. 112 6<sup>th</sup> paragraph when considered below.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 – 9 and 36 – 40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 – 8 recite a system but it appears reasonable to interpret this system by one of ordinary skill in the art as software per se. Applicant's specification provides no explicit and deliberate definition of the components ("collector", "generator", "analyzer") that make up the system other than they could be software components, which are directed to functional descriptive material, per se, and are therefore non-statutory.

Claims 9 and 36 recite "computer readable medium" which, according to Applicant's specification can include "communication media" which can embody "carrier wave". A carrier wave is a form of energy and does not fall within a statutory category of subject

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matters accorded patent protection. Amending claims 9 and 36 to recite "computer storage medium" instead of "computer readable medium" will overcome this rejection as interpreted according Applicant's specification.

Claims 37 – 40 recite "means plus function" phrase, however the means can be reasonably interpreted as software per se. Software is descriptive material, per se, and is therefore non-statutory.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 5, 7 – 11, 13 – 26, 28 – 32, 34 – 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg et al. (US Patent 6,966,015).

Claims 1, 9:

Steinberg discloses a computer system for building a health model of software components, comprising:

an instrumentation collector ("status monitor") for receiving information specifying instrumentation of software components (col. 4, lines 58-60, fig 1 item 14);

a health model generator for creating a health model using the information about the instrumentation of the software components (col. 5, lines 19-33, fig 1 item 22);

and an instrumentation analyzer ("edge correlation") for analyzing "trends or transitions in the states of the indicators" (col. 5, lines 47-57). Steinberg also discloses

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grouping indicators (instrumentation) that are expected to move together (col. 10, lines 36-39), however he does not disclose specifically grouping instrumentation that result in the same transition from one state of the health model to another state of the health model. It would have been obvious to someone with ordinary skill in the art at the time the invention was made to group instrumentation that result in the same transition from one state of the health model to another state of the health model because simultaneous failures of some components can lead to system crashes where individual component failure may not lead to such a dramatic and complete crash, and, grouping instrumentation that result in the same transition from one state to another will help better monitor the health of the system.

Claims 2, 3:

Steinberg discloses the system of claim 1 further comprising a database (col. 4, lines 66-67).

Claims 4, 8:

Steinberg discloses the system of claim 1 wherein the health model comprises an application that generates a state diagram with a transition from one state to another state for a group of instrumentation (figs. 6-11).

Claim 5:

Steinberg discloses the system of claim 1 wherein the instrumentation collector comprises a spreadsheet for manual entry of information about instrumentation of software components (col. 5, lines 63-67).

Claim 7:

Steinberg discloses the system of claim 1 wherein the instrumentation analyzer comprises an application that groups the instrumentation events by filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation (Abstract, col. 10, lines 36-40).

Claims 10, 36 – 37:

Steinberg discloses a method for building a health model of a software component, comprising the steps of:

receiving an inventory of instrumentation of the software component (col. 4, lines 66-67);

mapping the inventory of instrumentation to states of operation of the software component (col. 5, lines 19-33);

generating a health model using the information about the instrumentation of the software components (col. 5, lines 19-33, fig 1 item 22);

analyzing ("edge correlation") "trends or transitions in the states of the indicators" (col. 5, lines 47-57). Steinberg also discloses grouping indicators (instrumentation) that are expected to move together (col. 10, lines 36-39), however he does not disclose specifically grouping instrumentation that result in the same transition from one state of the health model to another state of the health model. It would have been obvious to someone with ordinary skill in the art at the time the invention was made to group instrumentation that result in the same transition from one state of the

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health model to another state of the health model because simultaneous failures of some components can lead to system crashes where individual component failure may not lead to such a dramatic and complete crash, and, grouping instrumentation that result in the same transition from one state to another will help better monitor the health of the system.

Claim 11:

Steinberg discloses the method of claim 10 further comprising the step of creating an inventory of instrumentation of the software component ("correlation engine", col. 5, lines 19-33).

Claims 13 – 16:

Steinberg discloses the method of claim 10 further comprising the step of determining states of operation ("plurality of possible states") of the software component (col. 3, lines 35-40).

Claims 17 – 18, 39:

Steinberg discloses the method of claims 10 and 37 further comprising means for adding instrumentation where there is none to indicate an occurrence of a transition from one state of operation to another state of operation (col. 5, lines 63-67).

Claims 19, 20:

Steinberg discloses the method of claim 10 further comprising the step of persistently storing the inventory of instrumentation and generated health model ("databases", col. 4, lines 66-67).

Claims 21 – 23:

Steinberg discloses the method of claim 10 further comprising revising the instrumentation of the software component, updating the health model using the revised instrumentation and generating a new health model (“frequent polling”, col. 3, lines 15-16).

Claims 24 – 26:

Steinberg discloses the method of claim 10 wherein the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more events, performance counters, and error messages (col. 7, lines 39-44).

Claim 28.

Steinberg discloses the method of claim 10 wherein the step of receiving an inventory of instrumentation comprises manually entering instrumentation information in a spreadsheet application (col. 5, lines 63-67).

Claims 29 – 32:

Steinberg discloses the system of claim 10 wherein the instrumentation analyzer comprises an application that groups the instrumentation events by filtering the instrumentation based upon the state of the software component before the occurrence of instrumentation and the state of the software component after the occurrence of instrumentation (Abstract, col. 10, lines 36-40).



Claims 34 – 35:

Steinberg discloses the system of claims 10 and 26 wherein the health model comprises an application that generates a state diagram with a transition from one state to another state for a group of instrumentation (figs. 6-11).

Claim 38:

Steinberg discloses the system of claim 37 further comprising means for collecting the inventory of instrumentation of the software component (col. 4, lines 58-60, fig 1 item 14).

6. Claims 6, 12, 27, 33, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg et al. (US Patent 6,966,015) in view of Peebles et al. (US Patent Publication 2003/0204789).

7. Claims 6, 12, 27

Steinberg discloses the method of claims 1, 10, and 11; however, he does not specifically state the data collection comprising a parser for automatically parsing a software component to extract information about instrumentation of the software component.

Peebles discloses a similar method of monitoring the performance health of a computer system by collecting status data where "the collector task further comprises a parser module" (paragraph 49). It would have been obvious to someone with ordinary skill in the art at the time the invention was made to use a parser for automatically

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parsing software component in Steinberg's system because that would speed the information extraction process.

Claims 33, 40:

Steinberg discloses the method of claims 10 and 37; however, he does not specifically disclose the step of analyzing the inventory comprising determining a component to blame for instrumentation indicating a failure of the software component.

Peebles discloses in his method, blaming a component ("one or more recommendations relating to the health") for software failure (paragraph 49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine which particular component was to blame for a failure in Steinberg's system in order to pinpoint the issues responsible for malfunctions and therefore making the system easier to manage and maintain.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doyle et al. (US PGPub 2005/0015668) discloses a method to autonomically diagnose and correct error conditions in computing systems using information gained from error logging.

Sandor W. Sklar ("The AIX Error Logging Facility", Sys Admin the Journal to UNIX Systems Administrators, June 3<sup>rd</sup> 2003) discloses how The AIX error logging facility works and presents a program to check for error messages.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Neway whose telephone number is 571-270-1058. The examiner can normally be reached on Mon - Thur 8:00AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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James W. Myhre  
Supervisory Patent Examiner